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# *LITHOBATES PIPIENS* (Northern Leopard Frog). MALFORMATION

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On 13 September 2011, AR collected a single metamorphosed *Lithobates pipiens,* 37.8 mm SVL, from a farm field in Minot, Ward Co., North Dakota, USA (48.1044°N, 101.1643°W). This frog contained two supernumerary arms that emerged from the throat (Fig. 1A). Upon collection, AR kept the frog in a plastic container and successfully fed several crickets to the frog. These arms were fully formed, and responded to stimuli (i.e., they would move when pinched with forceps). This frog was capable of full locomotion (i.e., walking, hopping, and jumping). The frog was brought to the Amphibian Growth Project (AGP) and euthanized by prolonged immersion in a 10% solution of MS-222, preserved in 10% formalin, and stored in 70% ethanol. The frog was shipped to ML who prepared radiograph images that revealed that these supernumerary limbs contained usual skeletal elements distal to the pectoral girdle (i.e., humerus, radius, ulna, metacarpals, carpels, phalanges). These arms were not articulated to any other part of the skeleton (Fig. 1B).

The AGP maintains a database of life history data for local amphibians that includes over 1250 capture records of *L. pipiens* from 2005–2012 from several sites in northwestern and north central North Dakota. This is the first report of a malformed frog that we are aware of in this region. Metamorphosis in this region occurs during July at ca. 25 mm SVL. Given the timing of collection, the size of the frog, and the observation that this frog could capture and consume prey successfully, we are comfortable with suggesting that this frog was at least 16 months old.

The most likely wetland that produced this frog is ca. 500 m away from the collection site. This wetland is surrounded by farm fields maintained by the North Central Research Extension Office of North Dakota State University. The wetland is generally oval in shape and is approximately 200 × 100 m. It has held water continuously since 2007, but would dry periodically prior to this. When full of water, the maximal depth in this wetland is 1.75 m.

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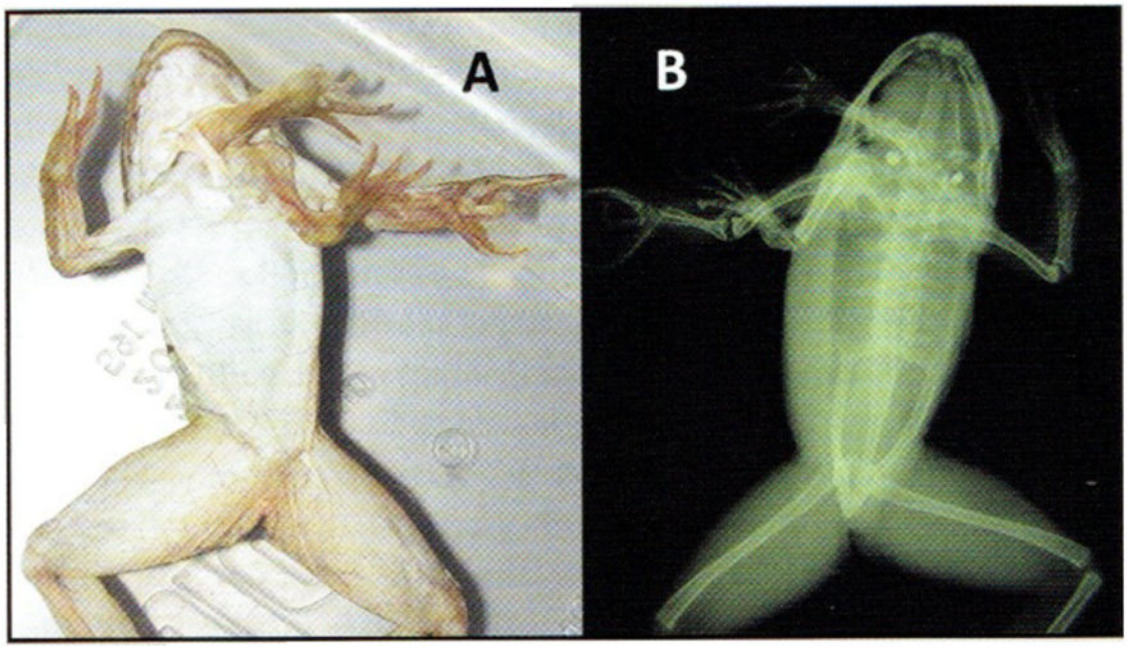


**FIG. 1.**

A) Ventral view of preserved *Lithobates pipiens* collected in Ward Co., North Dakota with two supernumerary arms. B) Radiograph of same individual.